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January 5, 2012

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: LightSquared Subsidiary, LLC
Ex Parte Communication. IB Docket No. 11-109
IBSF File No. SAT-MOD-20101118-00239

Dear Ms. Dortch,

I am writing on behalf of myself and other surveyors in my state to express our concern with LightSquared's proposed "solution" to the harm its wireless broadband initiative would do to the national GPS. We have serious misgivings about the FCC granting LightSquared conditional approval (FCC File No. SAT-MOD-20101118-00239) to push forward with their initiative to build a nationwide 4G-LTE wireless broadband network. According to LightSquared's own report, most High Precision GPS devices would be rendered useless by LightSquared's actions. These are the very devices that surveyors around the country use everyday.

The Department of Defense, FAA, DHS, NASA, DOI, DOT, DOC, and the Professional Land Surveying and Engineering professions, have all expressed serious reservations in regards to this plan by LightSquared LLC company to build 40,000 ground stations in the U.S. that could cause widespread interference to GPS signals. This network of ground stations will transmit signals within the L-band frequency immediately adjacent to the GPS L1 frequency at more than one billion times the strength of the low-power GPS signal from space. Furthermore, each mobile phone using LightSquared's wireless service would potentially become a portable GPS jamming device by jamming GPS receivers in its immediate vicinity.

As you may know, a Technical Working Group (TWG) comprised of LightSquared representatives and GPS industry experts conducted several tests on the effect that LightSquared's signals will have on high precision GPS devices. The tests conclude that: (1) the LightSquared Base Station 4G LTE signals harmfully interfere with High Precision GPS receivers over long ranges; (2) the LightSquared Base Station signals cause harmful co-channel interferences with the FCC licensed StarFire and OmniSTAR augmentation systems; (3) LightSquared handsets, when operating close to a GPS receiver, harmfully interfere with it; (4) current GPS receivers using other GNSS constellations and augmentations systems with signals in the GPS L1 band will suffer harmful interference from the LightSquared signals for the same reason as do the GPS signals; (5) in the lower 10 MHz channel

configuration, 31 of 33 High Precision and Network GPS receivers tested experienced harmful interference within the range of power levels that would be seen inside the network. High Precision receivers would experience harmful interference at up to 5 km (3± miles) from a single LightSquared base station.

We know of nothing feasible that can be done to make the high precision GPS receivers that surveying and mapping professionals use work properly when in the vicinity of a LightSquared base station. Additionally, we know of no currently available receiver, filter, antenna or other mitigation technology that would enable the construction of future High Precision GPS receivers and augmentation systems that are compatible with LightSquared's rollout plans. Finally, we believe that the most straightforward mitigation would be for LightSquared to use a different frequency band for their terrestrial network.

High-precision GPS equipment used by land surveyors, civil engineers, farmers, and other geomantic professionals costing thousands of dollars per receiver would be more adversely affected than the consumer GPS devices given their inherent design. Literally, tens of thousands of high-precision GPS receivers are used in the United States. GPS technology has transformed the way Americans have built and managed our infrastructure, adding a tremendous level of efficiency to the design, construction, and maintenance of roads, bridges, commercial properties, residential subdivisions, parks, farms, golf courses, etc. Across the country, High Precision GPS has become an essential tool for most land surveyors and geomantic professionals today and it is imperative that these GPS signals are not jeopardized by broadband technology. The FCC must make clear, and the NTIA (National Telecommunications and Information Administration) must ensure, that LightSquared's license modification is contingent on a finding of no interference by LightSquared's signals on High Precision GPS usage. The findings of no interference must contain a high degree of certainty, because public welfare and safety depends on accurate systems. It will be too late to worry about fixing the problem when LightSquared's system is already up and running.

Thank you for your concern and attention to this very important matter.

Best Regards,

Josh L. Lewis III
RLS 1751